

## WHAT IS CLAIMED IS:

- 5           1.     A connector assembly for use with a tarp, said connector assembly comprising:
- male and female connector members, each said connector member comprising:
- a base portion having broad, generally flat bearing face for  
10                   engaging material of a tarp;  
                  at least one of said connector members further comprising:
- a handle portion extending from said base portion opposite  
                          said bearing face for being gripped and rotated by the fingers of a  
                          hand and having an opening for attachment of a load thereto;
- 15           said male connector member further comprising:
- a threaded screw portion extending normal to said bearing face  
                          thereof, said screw portion having a tapered, sharply pointed tip for  
                          piercing material of a tarp; and  
                  said female connector member further comprising:
- 20                   a threaded socket portion extending normal to said bearing face  
                  thereof for receiving said screw portion of said male connector member in  
                  threaded engagement therewith.
- 25           2.     The connector assembly of claim 1, wherein each of said bearing faces comprises:
- a plurality of raised protuberances for frictionally engaging material of a  
                  tarp so as to prevent accidental loosening of said connector members.
- 30           3.     The connector assembly of claim 2, wherein said raised protuberances have substantially rounded contours so as to avoid damaging material of a tarp that is engaged thereby.

5           4.     The connector assembly of claim 3, wherein said raised protuberances  
comprise:

              a plurality of elongate, substantially oval protuberances arranged radially  
about said screw and socket portions.

10           5.     The connector assembly of claim 2, wherein said base portions of said  
male and female connector members each further comprise:

              a raised, substantially flat-surfaced clamping ring formed annularly around  
said screw and socket portions, respectively, for clamping said tarp about an opening  
formed by said screw portions so as to prevent tears from propagating therefrom.

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              6.     The connector assembly of claim 5, wherein said raised protuberances are  
formed around outer perimeters of said clamping rings on said male and female  
connector members.

20           7.     The connector assembly of claim 2, wherein each said bearing face is  
substantially circular so as to evenly distribute loads into material of a tarp that is  
engaged thereby.

              8.     The connector assembly of claim 7, wherein each said base portion further  
25 comprises:

              a radiused rim extending about a perimeter of said circular bearing face for  
progressively engaging material of a tarp so as to avoid damage thereto.

              9.     The connector assembly of claim 8, wherein each said radiused rim  
30 comprises:

              a rounded lip having smoothly contoured radius that extends away from a  
plane of said flat bearing face through an arc of about 90° or greater.

              10.    The connector assembly of claim 7, wherein each said handle portion  
35 comprises:

5                   a flange portion extending generally normal to said base portion for being gripped between a thumb and forefinger.

11.     The connector assembly of claim 10, wherein each of said flange portion comprises:

10                   a generally semicircular flange having first and second sides that flare concavely towards said base portion of said connector member.

12.     The connector assembly of claim 11, wherein said at least one opening for attachment of a load comprises:

15                   a bore formed in at least one of said flange portions.

13.     The connector assembly of claim 9, wherein said at least one opening for attachment of a load comprises:

20                   a hook portion mounted on at least one of said flange portions.

14.     A connector assembly for use with a tarp, said connector assembly comprising:

                  male and female connector members, each said connector member being unitarily molded and comprising:

25                   a base portion comprising:

                          a broad, generally flat, substantially circular bearing face for engaging material of a tarp;

                          a plurality of raised, generally oval protuberances formed on said bearing surface for frictionally engaging material of a tarp so as to prevent accidental loosening of said connector members, said protuberances being arranged radially proximate a perimeter of said circular bearing face so that the long axes thereof are disposed generally perpendicular to a direction of rotation of said bearing face, said protuberances further having substantially

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5 rounded contours so as to avoid damaging material of a tarp that is engaged thereby; and

10 a smoothly radiused lip extending around a perimeter of said circular bearing face for progressively engaging material of a tarp so as to avoid damage thereto, said radiused lip extending away from a plane of said bearing surface through an arc of about 90° or greater;

at least one of said connector members further comprising:

a handle portion extending from said base portion opposite said bearing face, said handle portion comprising:

15 a flange portion extending generally normal to said base portion and having first and second concavely flared sides for being gripped between a thumb and forefinger, said sides spreading apart toward said base portion so as to form a thickened area of said flange portion where said flange portion is joined to said base portion; and

20 an opening for attachment of a load to said flange portion; said male connector member further comprising:

a threaded screw portion extending normal to said bearing face thereof, said screw portion having a tapered, sharply pointed tip for piercing material of a tarp; and

25 said female connector member further comprising:

a threaded socket portion extending normal to said bearing face thereof for receiving said screw portion of said male connector member in threaded engagement therewith.

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15. The connector assembly of claim 14, wherein said radiused lip extends away from said plane of said bearing surface through an arc of about 180° or greater.

16. The connector assembly of claim 14, wherein said screw portion of said male connector member comprises:

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5                   a tapered thread for gradually spreading material of a tarp so as to  
minimize damage to said material as said material is penetrated by said screw  
portion.

10           17.     The connector assembly of claim 14, wherein said screw portion of said  
male connector member is a two-stage screw comprising:

                  a tapered thread portion proximate said pointed tip; and

                  a straight-sided thread portion proximate said base portion of said male  
connector member, said socket portion of said female connector member having a  
cooperating straight-sided thread portion formed therein.

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          18.     The connector assembly of claim 14, wherein said base portions of said  
male and female connector members each further comprise:

                  a raised, substantially flat-surfaced clamping ring formed annularly around  
said screw and socket portions, respectively, for clamping said tarp about an  
opening formed by said screw portions so as to prevent tears from propagating  
therefrom.

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          19.     The connector assembly of claim 16, wherein said raised protuberances  
are formed along outer perimeters of said clamping rings on said male and female  
connector members.

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          20.     The connector assembly of claim 14, wherein each said opening for  
attachment of a load comprises:

                  a bore formed through said flange portion.

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          21.     The connector assembly of claim 14, wherein each said opening for  
attachment of a load comprises:

                  a hook portion mounted on said flange portion.

5           22.    The connector assembly of claim 14, wherein said male and female  
connector members are each formed unitarily of injection-molded plastic.

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